example, HBr , by heating the process wafer to about 80°C can be optimally performed by, for example, by subjecting the process wafer to heating under the for a period of about 45 to about 75 seconds, most preferably about 60 seconds with removal of about 85% of the acidic contamination. It will be appreciated by the skilled practitioner that the process time may be varied by altering the pumping speed (or pressure) and/or by altering heat transfer characteristics.

0024 According to the present invention, the process wafer is heated by convective and conductive methods preferably by passing a heat transfer fluid through a base plate equipped with a heat exchange manifold with the base plate in contact with the process wafer. Any suitable heat transfer fluid, such as water or a glycol/water mixture may be used. Further, any suitable heat exchange manifold allowing heat transfer may be used, however heat exchange surfaces that optimize heat transfer are preferable and are well known in the art. For example, according to the present invention, a wafer support plate (base plate) used in the cooling chamber of the prior art in as shown in Figure 1

at 24 may be modified or replaced with a heat exchange system according to the present invention to allow a heat transfer fluid in communication with a heat exchanger to pass heat exchange fluid through the base plate heat exchange manifold to convectively and conductively remove heat from the process wafer.

0025 According to the present invention, the heat exchanger is preferably attached external to the process chamber and may be advantageously equipped with an interlock flow switch to alert the operator should fluid flow be interrupted. Any suitable interlock flow switches, which are well known in the art, may be used. Further, conventional methods of interfacing the heat exchanger for computer control may be advantageously used. For example, the heat exchanger may contain a conventional temperature sensor and a conventional flow rate sensor for adjusting a temperature and a flow rate, respectively. A suitable heat exchanger, for example, is preferably one that may easily maintain a flowing heat exchange fluid temperature according to the present invention within a range of 75°C to 100°C.

0026 Further, the chamber walls may additionally be fitted with heat exchange conduits, as are well known in the art, for likewise passing a heat exchange fluid also preferably heated to about 80°C to minimize condensation of the acids (e.g., HBr or HCl) that have been vaporized from the process wafer from re-condensing onto the walls of the heating chamber.

0027 Referring to Figure 3 where the heating chamber is shown in greater detail, in operation, heating chamber 302 houses base plate 304 equipped with a heat exchange manifold (not shown) and a heat exchange surface 305 which is in fluid communication with heat exchanger 322 located externally to the chamber 302 the chamber ambient pressure being maintained under vacuum by vacuum pump 312. Heat exchange fluid is supplied by pump 309 from heat exchanger 322 by way of line 314 to base plate 304 equipped internally with a heat exchange manifold (not shown) in contact with heat exchange surface 305 which in turn contacts wafer 308 to convectively and conductively transfer heat between the heat exchange fluid and the process wafer 308. Following heat